

## HARSH MAKWANA

### SENIOR SOFTWARE ENGINEER

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Experienced and versatile **Senior Software Engineer** with over **6 years** of progressive experience in building **cloud-native, distributed backend systems**. Adept in **NestJS, GraphQL, gRPC, Temporal**, and **AWS infrastructure**, with a deep focus on performance, scalability, observability, and clean architecture. Proven ability to lead complex microservices projects, integrate AI into the developer workflow, and deliver high-availability streaming and blockchain platforms. Passionate mentor, open-source contributor, and a strong advocate for intelligent, fault-tolerant software design.

## SKILLS

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**Languages & Tools:** TypeScript, JavaScript, Python, SQL

**Backend & APIs:** Node.js, NestJS, Express.js, GraphQL, gRPC, REST

**Async & Messaging:** RabbitMQ, BullMQ, Temporal, Redis Streams

**Databases:** PostgreSQL, MongoDB, Redis

**Infrastructure:** AWS (EC2, ECS, S3, Lambda, CloudFront, SES), Docker, Kubernetes, Helm

**CI/CD & DevOps:** GitHub Actions, CircleCI, AWS CodePipeline, Terraform

**Testing & Observability:** Jest, Locust, Grafana, Fluent Bit, Loki, Structured Logging

**Web3 & Blockchain:** Web3Auth, Envio Indexer, Metamask Integration

**AI-Augmented Development:** GitHub Copilot, Claude.ai for architecture & workflow design

## PROFESSIONAL EXPERIENCE

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**Simform Solutions, Ahmedabad, GJ**

**Sr. Software Engineer — January 2023 – Present**

- **Led end-to-end architecture and execution** of a large-scale, event-driven authority delegation system, introducing scalable workflows, asynchronous operations, and efficient service communication patterns.
- **Improved developer productivity and system maintainability** by creating internal frameworks and open-source packages that streamlined integration of complex tools like workflow orchestration engines and type-safe communication protocols.
- **Optimized critical backend services** by redesigning query strategies for real-time APIs, achieving significant performance gains and reducing response times by over 50% on high-traffic endpoints.
- **Established engineering standards and reusable foundations** for backend services through modular boilerplates, enabling rapid onboarding, consistent code quality, and architectural alignment across microservices.
- **Designed reliable, state-aware notification workflows**, handling distributed scheduling, retries, and escalation logic across asynchronous services using workflow orchestration best practices.
- **Served as a technical mentor and team enabler**, guiding peers on systems design, architecture thinking, AI-assisted development techniques, and modern backend patterns — fostering a culture of continuous learning and innovation.

- **Transitioned from frontend development to full-stack engineering**, quickly adapting to backend principles and taking ownership of complex API architecture and data flow design.
- **Designed scalable and maintainable backend systems** that supported high user loads, optimized performance, and minimized resource consumption.
- **Led production support and debugging efforts** for mission-critical features including automated data extraction, secure authentication, and external service integrations.
- **Implemented deployment automation pipelines**, ensuring rapid, repeatable releases with minimal downtime and high reliability across staging and production environments.
- **Actively contributed to team-wide engineering excellence** by promoting best practices in DevOps, documentation, logging, observability, and collaborative problem-solving.

- **Contributed to the early development and UI design** of internal productivity tools used daily by 1000+ employees, gaining hands-on experience in real-world product environments.
- **Built strong foundational knowledge in software design principles**, user interface patterns, and modular component development within a collaborative team setting.
- **Proactively expanded into backend development**, taking initiative to work on API integrations and backend logic for mobile applications — marking the beginning of a deeper backend specialization journey.

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## OPEN SOURCE

- **nestjs-temporal** – NPM package to simplify Temporal integration in NestJS
- **nestjs-grpc** – Interface and type-safe generation from `.proto` files
- **GitHub Boilerplates** – Microservices template with Kubernetes, RabbitMQ, Redis, Temporal, and observability stack (Loki, Grafana, Fluent Bit)
- **Blogging & Technical Writing** – [dev.to/hmake98](https://dev.to/hmake98): Microservices, logging, distributed workflows

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## EDUCATION

- Developed and deployed a full-stack educational portal using **PHP** and **Angular**, streamlining administrative workflows and increasing efficiency by **30%**
- Led the tech team for the institute's annual techfest; managed full-cycle web development and coordinated cross-functional team execution

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## Notable Achievements

- Built and scaled multiple **mission-critical microservices** under tight deadlines using AI-assisted workflows
- Created foundational **architecture and codebase patterns** adopted across teams

